

CLIMATE CHANGE ADAPTATION PLANNING FOR NORTHWEST SKEENA COMMUNITIES

Social Science Team Report

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With

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Purpose of the Project

- ❑ To examine environment change, particularly the impact of climate change on forests and rivers (i.e. riparian zones) in the Skeena watershed region.
- ❑ To identify what are the 'values' identified by residents of local communities with regard to their environment.
- ❑ To develop an understanding of the 'vision' of the future of their community that is held by residents of local communities.

Purpose of the Project- continued

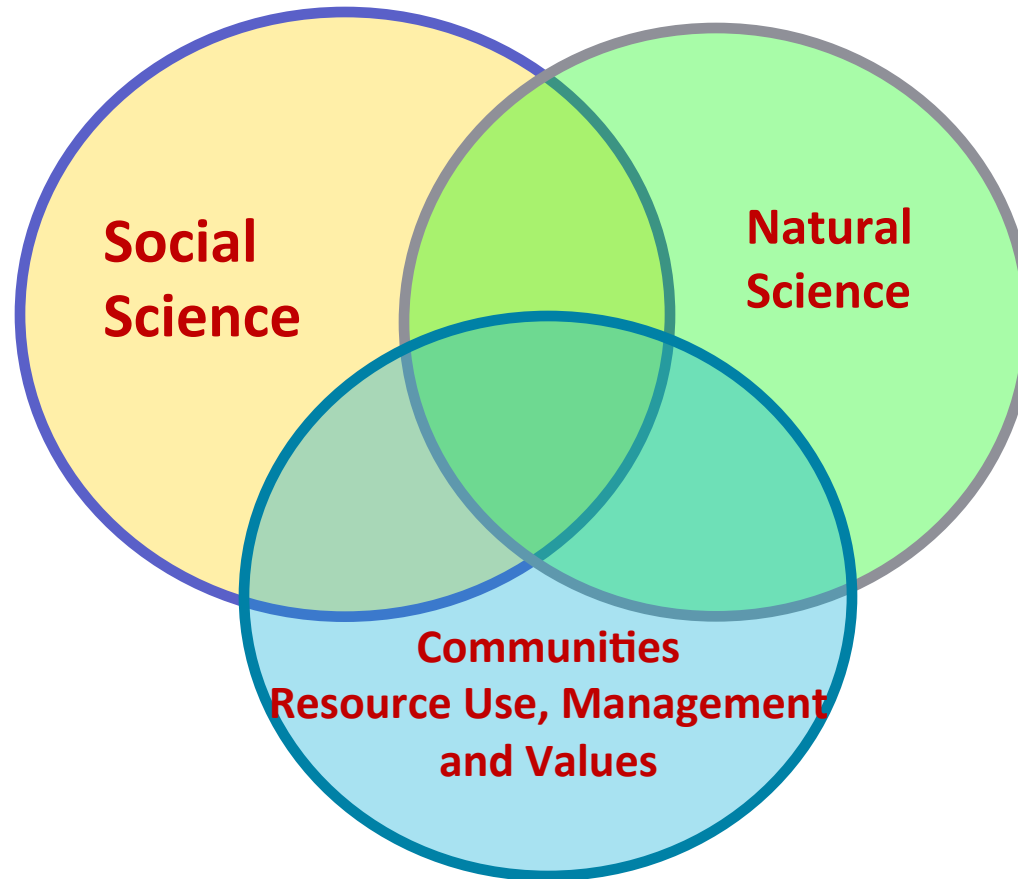
To provide the basis upon which local decision makers may develop a plan for the development of forests and river systems in the Skeena regions that:

- ❖ Takes into account the impact of climate change on the environment.
- ❖ Takes into account the 'values' identified by local communities.
- ❖ Is consistent with the changes and future that local community residents identify.

SUM: TO HELP LOCAL COMMUNITIES TO DEVELOP A SUSTAINABLE ENVIRONMENTAL PLAN FOR THE SKEENA REGION THAT:

- ❖ *IS BASED ON COMMUNITY VALUES*
- ❖ *REFLECTS THE POTENTIAL IMPACT OF CLIMATE CHANGE.*

Purpose of the project: Three Types of Knowledge Intersection and Integration



Who is Involved:

► Funding:

- Future Forest Ecosystem Science Council - BC Government
 - Research Grant to Coast Tsimshian Resources (CTR)
- World Wildlife Fund (WWF)

► Research:

- Social Research
- Department of Sociology – UBC

- Natural Science:
- ESSA Consulting;
- Cortex Technologies;
- BC Ministry of Environment;
- BC Ministry of Forests, Lands, and Natural Resource Operations
- Environment Canada

► Administration:

- CTR -Brinkman Forest Resources; WWF

The Community Reports: What do we mean by Values?

- ❑ Note: Goal is to incorporate local community values into resource management
 - ❑ Two Meaning of Values:
 - ❖ Your fundamental beliefs about what is 'right'
E.g. honesty, integrity, self-sufficiency
 - ❖ **What** it is that you value
E.g. clean environment; quality of life; health; lifestyle
- Our 'Social Research' on community values focuses on What you value".

Community Report: The Issue of Adaptation vs. Adaptive Capacity

- ❑ Stewart Cohen talked in his opening remarks about adaptation and adaptation policy
 - ❖ Basic focus is on how to respond to climate change
 - ❖ i.e. adaptation is different from mitigation
- ❑ We no longer can ignore that climate change is real or that we can mitigate it.

The Path Ahead

- ❑ Adaptation to climate change
 - ❑ What changes do we have to make to “the way we do things around here” (i.e. **institutional culture**), to adapt to the changing environment?
 - ❑ What changes do we have to make to the way we are **organized** in our community and our economic and social activity to adapt to the changing environment
 - ❑ What **knowledge** do we have and what knowledge do we need, to adapt to the changing environment?
 - ❑ What changes do we need to make to the way we **act / behave** to adapt to the changing environment?

Adaptation vs. Adaptive Capacity (continued)

- ❑ Adaptive Capacity is the ability of a community to respond effectively to its exposures, vulnerabilities and threats, and in a way that leads to positive development.
- ❑ It is different from Resilience
- ❑ It is more than Adaptation

What is Adaptive Capacity?

- ❑ It is the ability of a community to respond effectively to challenges.
- ❑ It depends on **flexible organization**
- ❑ It depends on a **culture of institutional openness** to change and alternatives.
- ❑ It depends on **the actions of individuals** in organizations and community cultures.
- ❑ It involves the integration of **knowledge** and the incorporation of new knowledge

❑ I WILL RETURN TO THIS AT THE END OF THE MORNING –

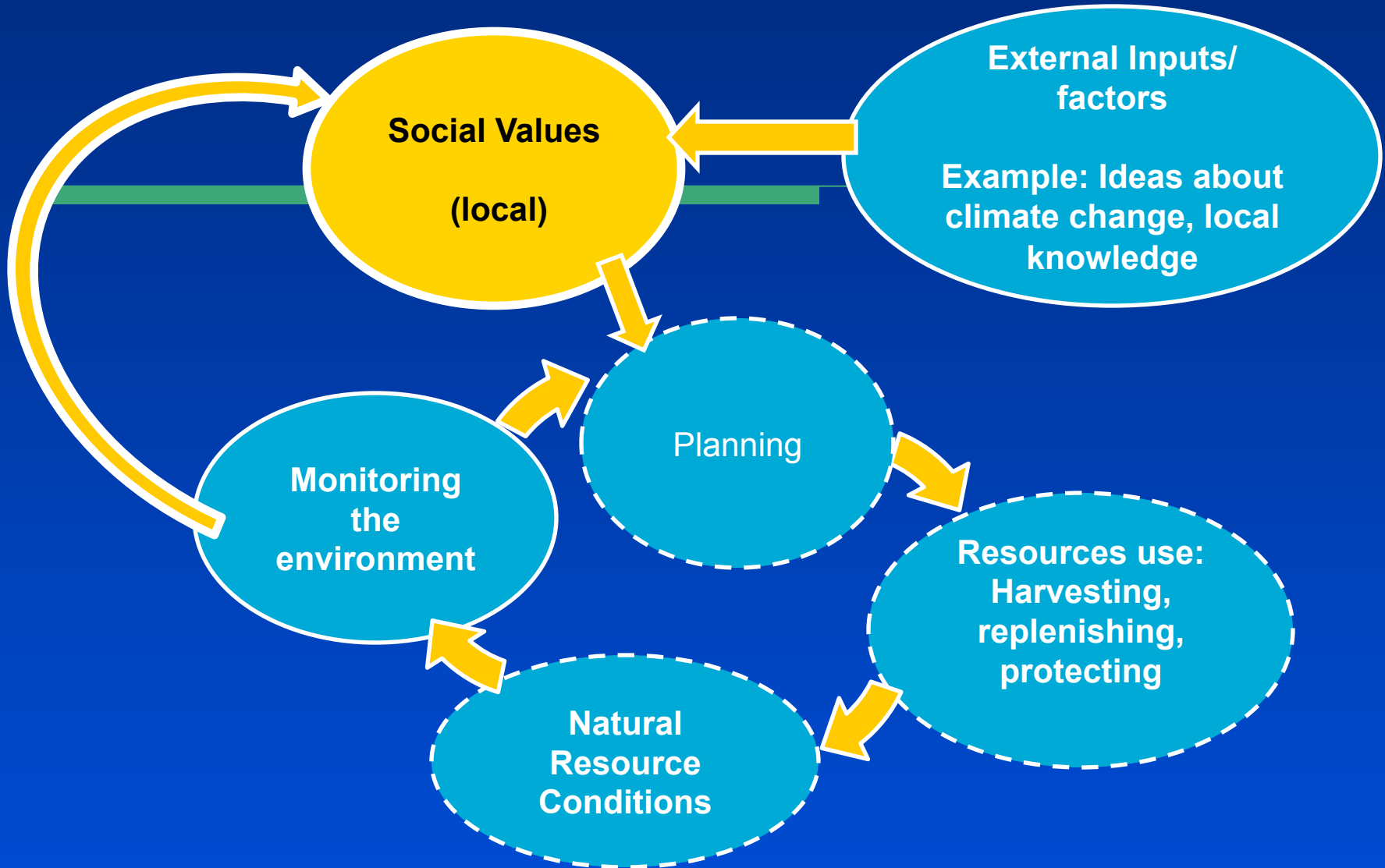
❑ But now.....

❖ THE SOCIAL SCIENCE REPORT ON YOUR COMMUNITY BASED ON 50 INTERVIEWS WITH COMMUNITY MEMBERS

Sociology Report Part I: Yesterday and Today

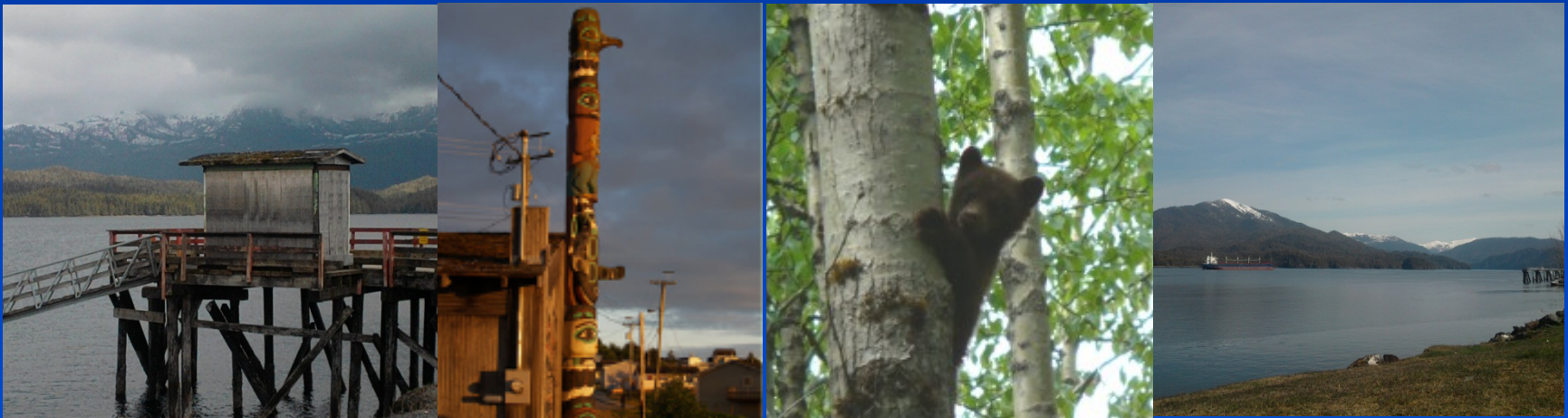
- Who was interviewed?
- What resources are valued?
- How have these resources changed?
- What are the key community issues?

The Role of Sociology



Sociology Team Research

- 50 interviews in each community
- Purposive sample focused on people in key positions of leadership and resource management
- 1-3 hours for each interview



Who Was Interviewed

Men	36
Women	14

Resource Usage	
High	4
Medium	6
Low	34
No usage	6

Length of Residence	
Very long time (+20 years)	37
Long time (10 - 20 years)	6
Medium time (5-10 years)	6
Short time (1-5 years)	0
New to community (Less than 1 year)	1

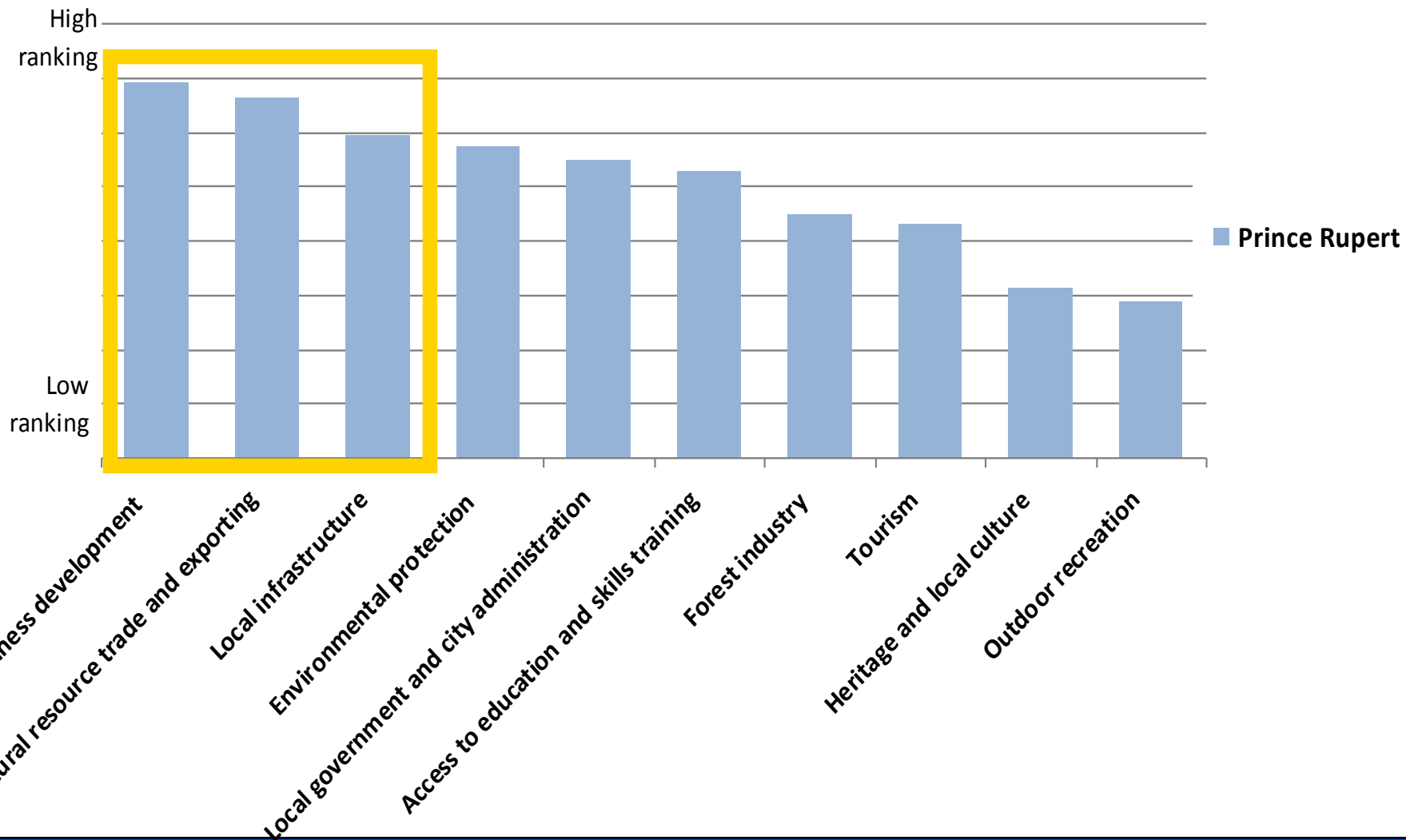
Who Was Interviewed

Occupations	
Community leader	2
Councillor	4
High level manager	3
Mid-level manager	12
Small operation manager	6
Administrator	3
Sole proprietor	5
Resource worker	2
Other worker	4
Retired	9

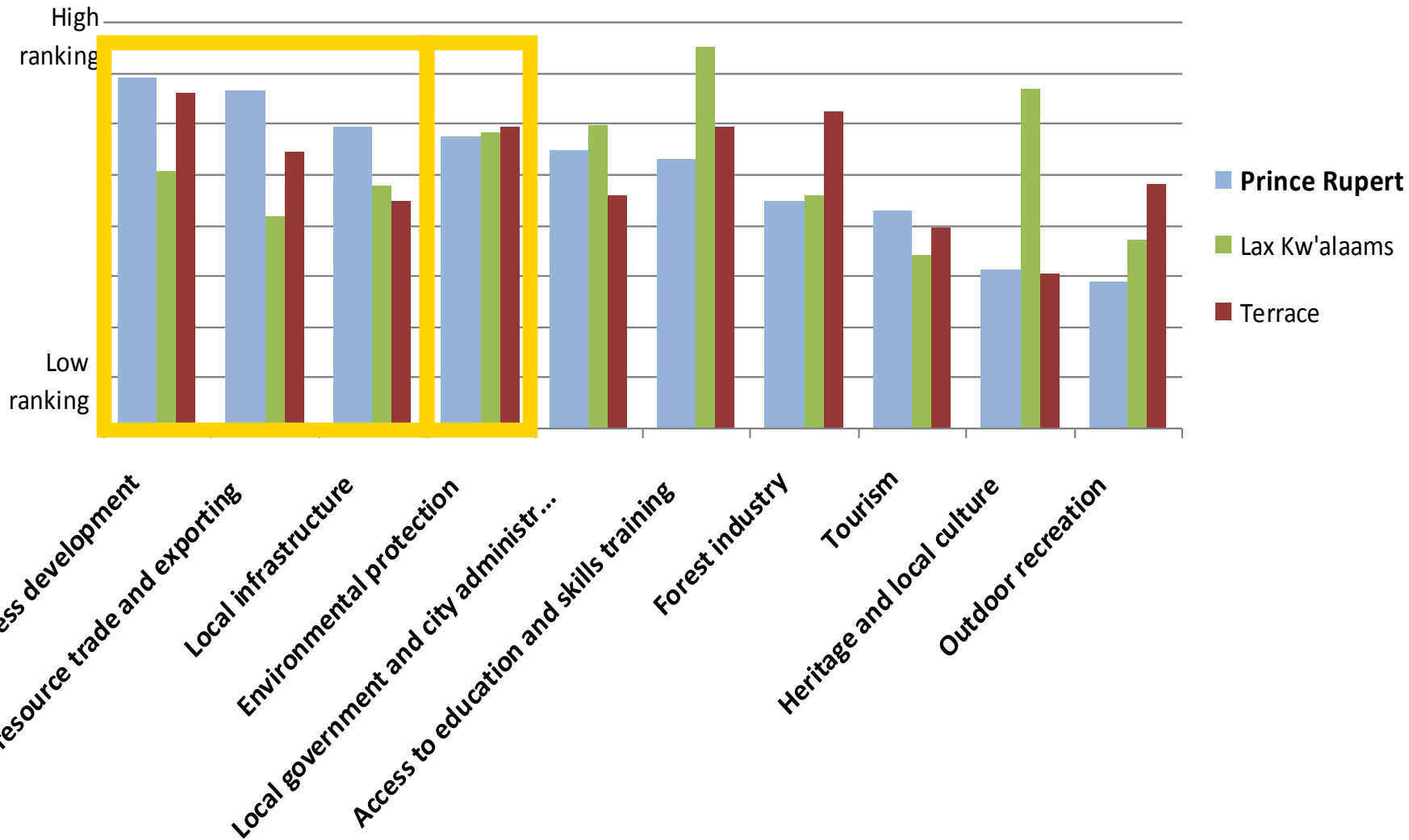
Public Sector	23
Private Sector	15
Retired	9
Non-government organization	3

Community Involvement	
More than 10 hours per week	15
2 - 10 hours per week	24
0 - 2 hours	3
No Involvement	8

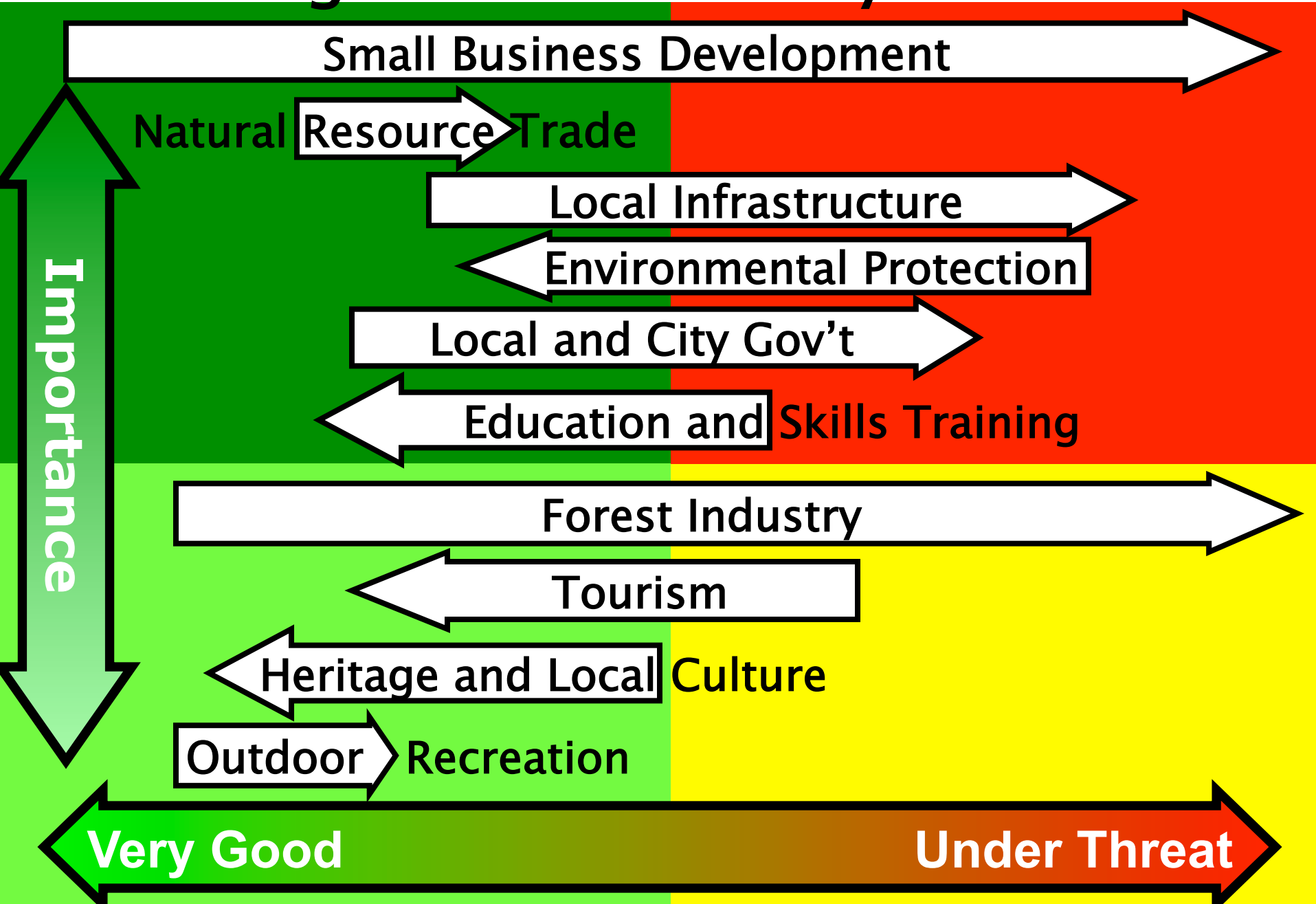
Valued Community Resources in Prince



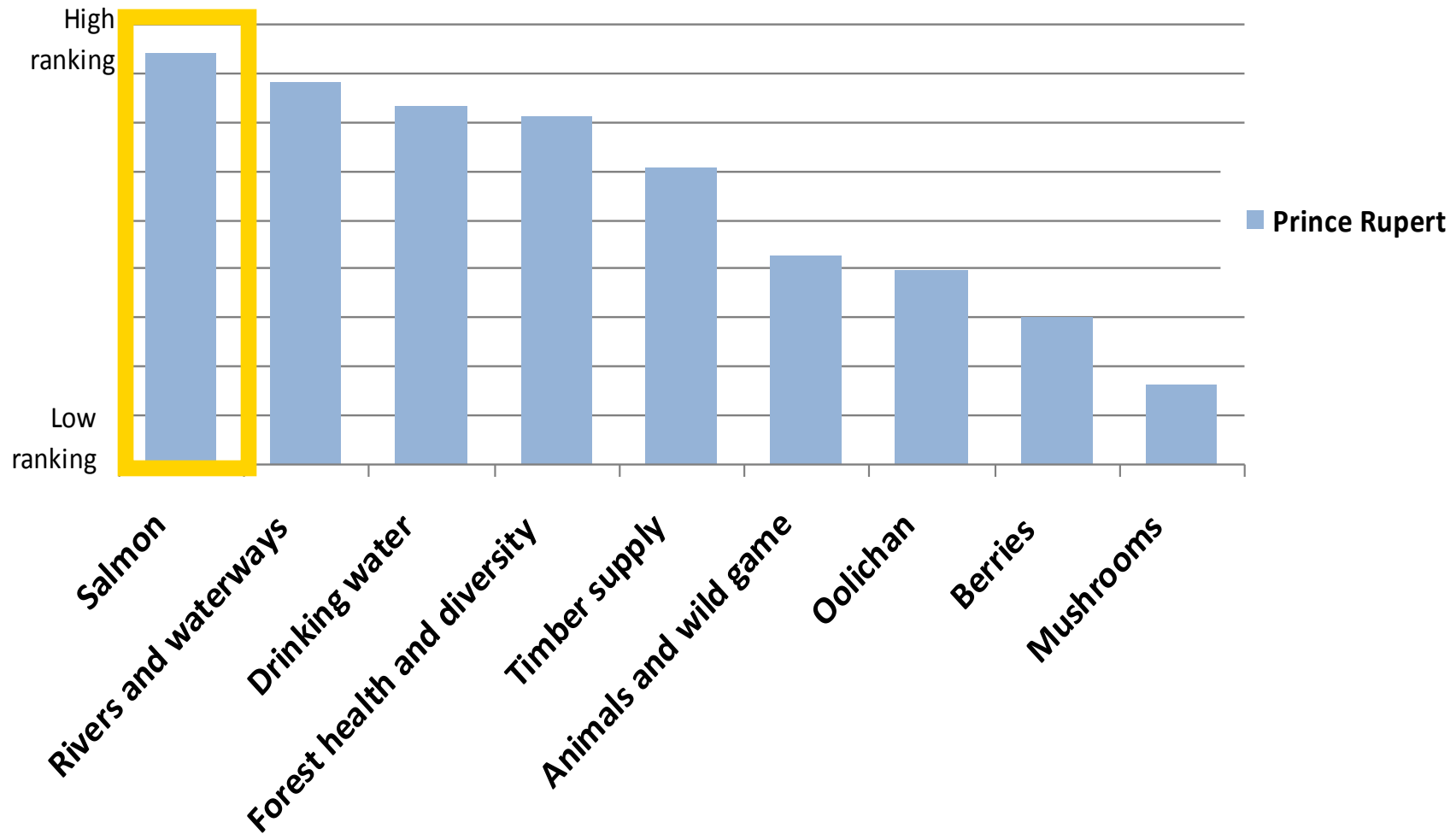
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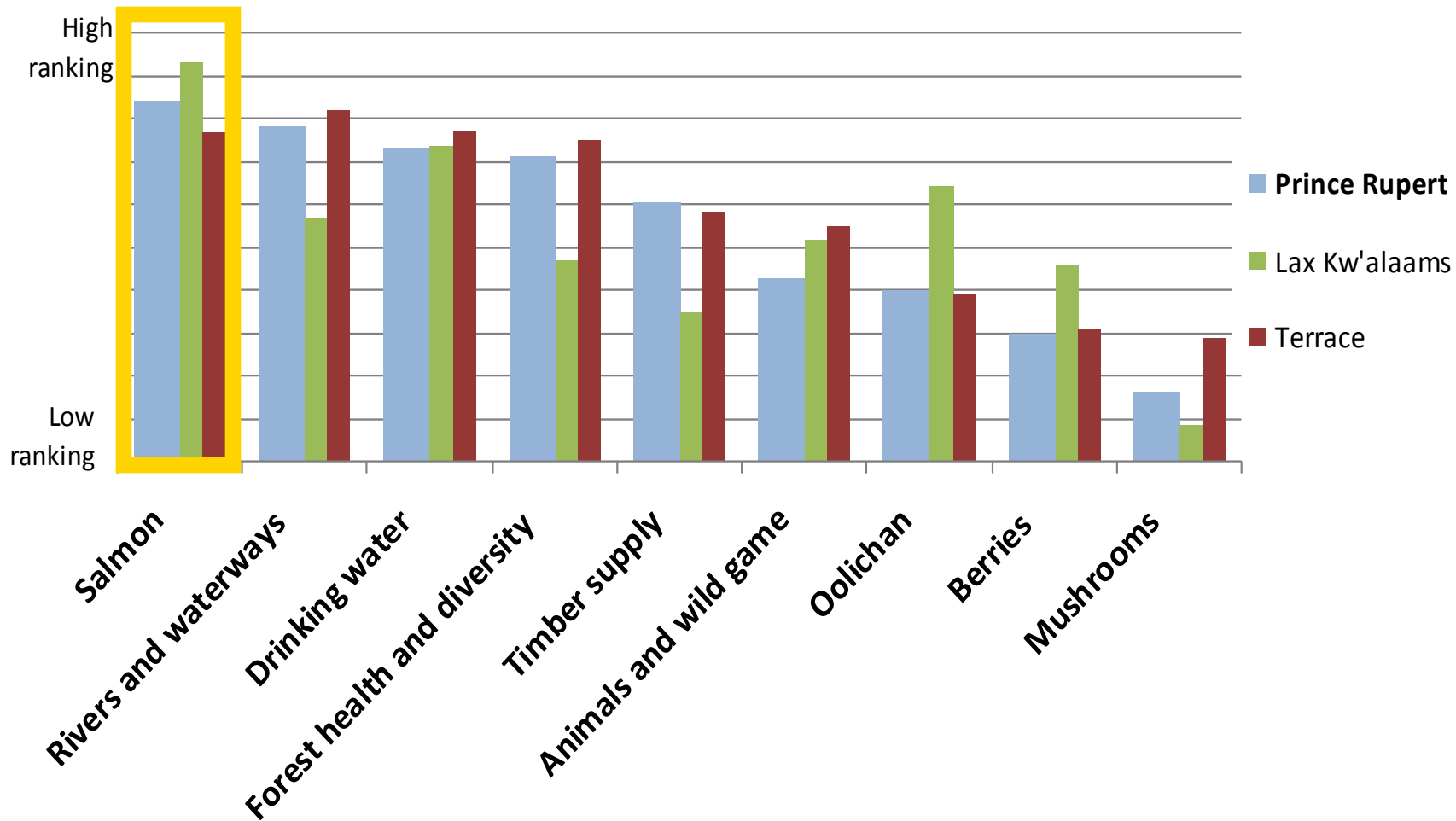
Changes in Community Resources



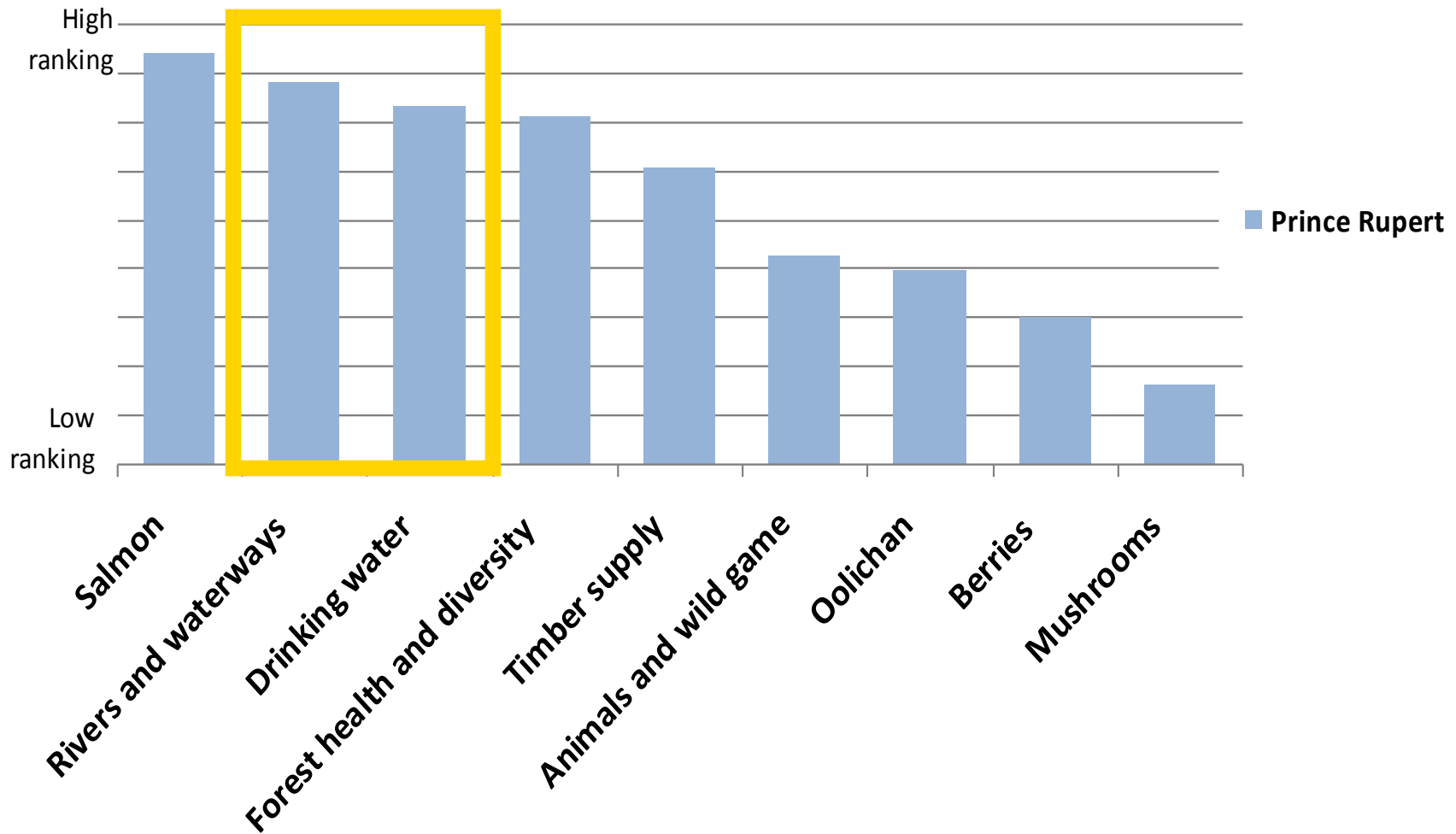
Valued Natural Resources in Prince



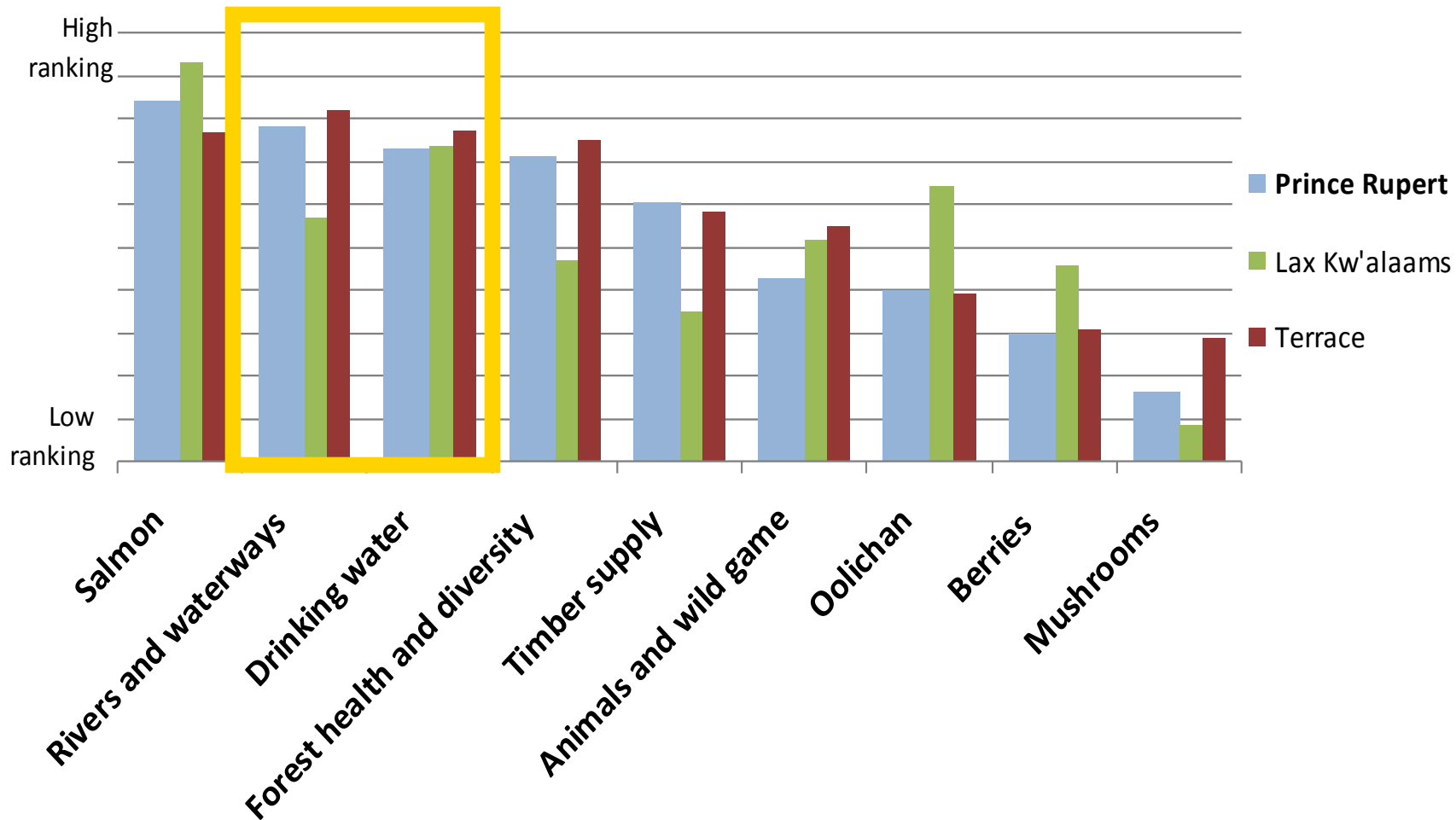
Valued Natural Resources in Prince Rupert



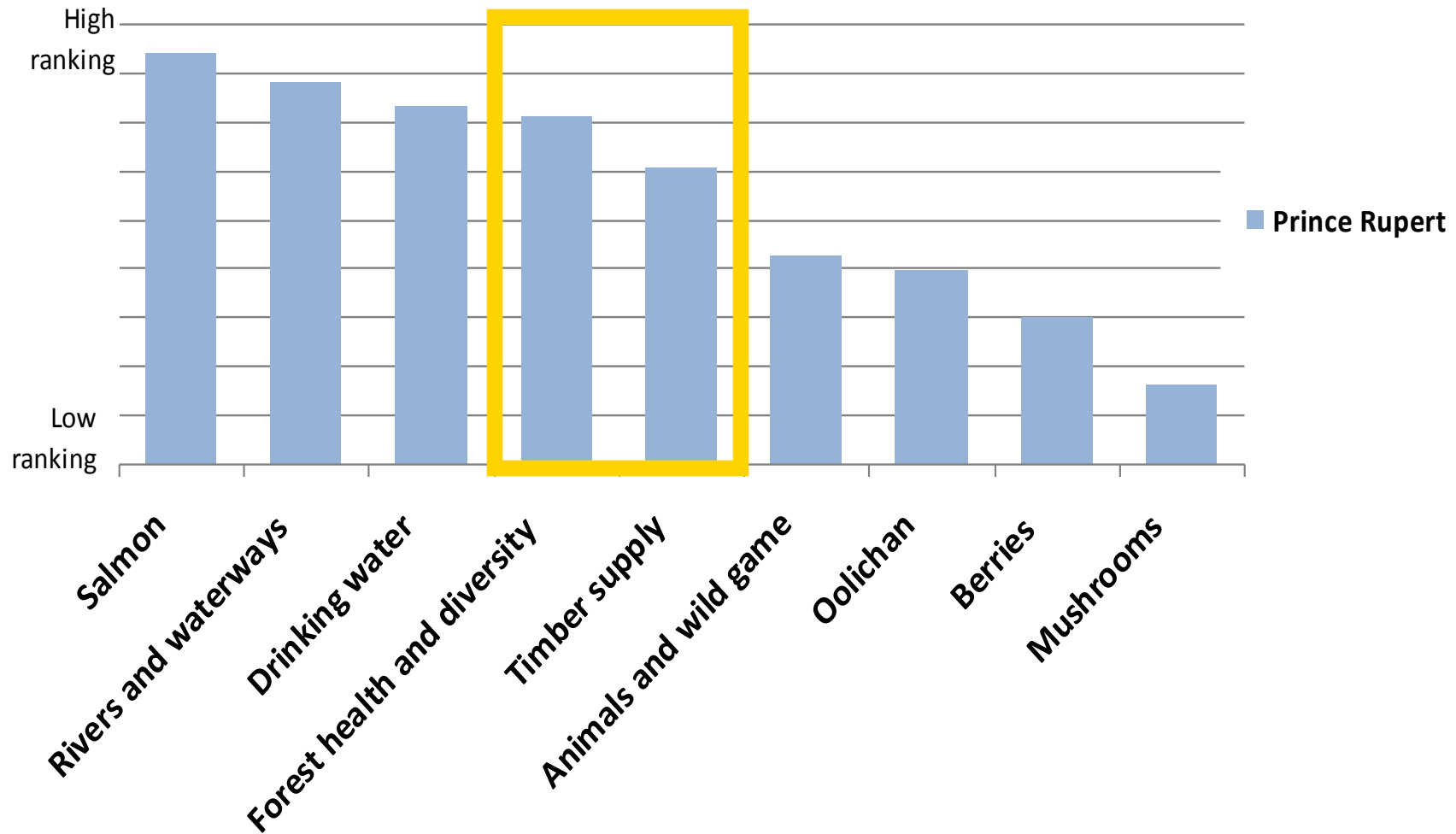
Valued Natural Resources in Prince



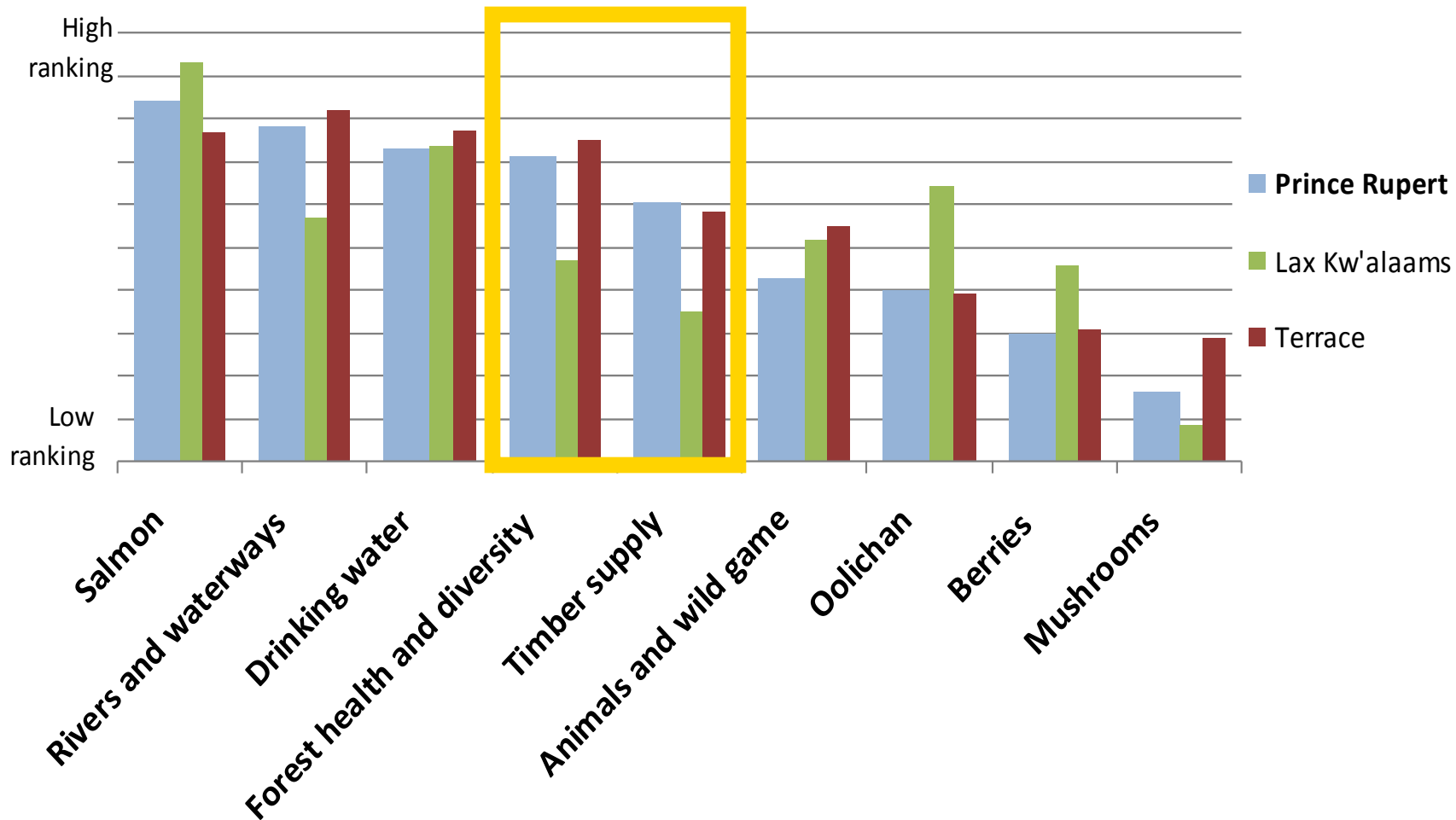
Valued Natural Resources in Prince Rupert



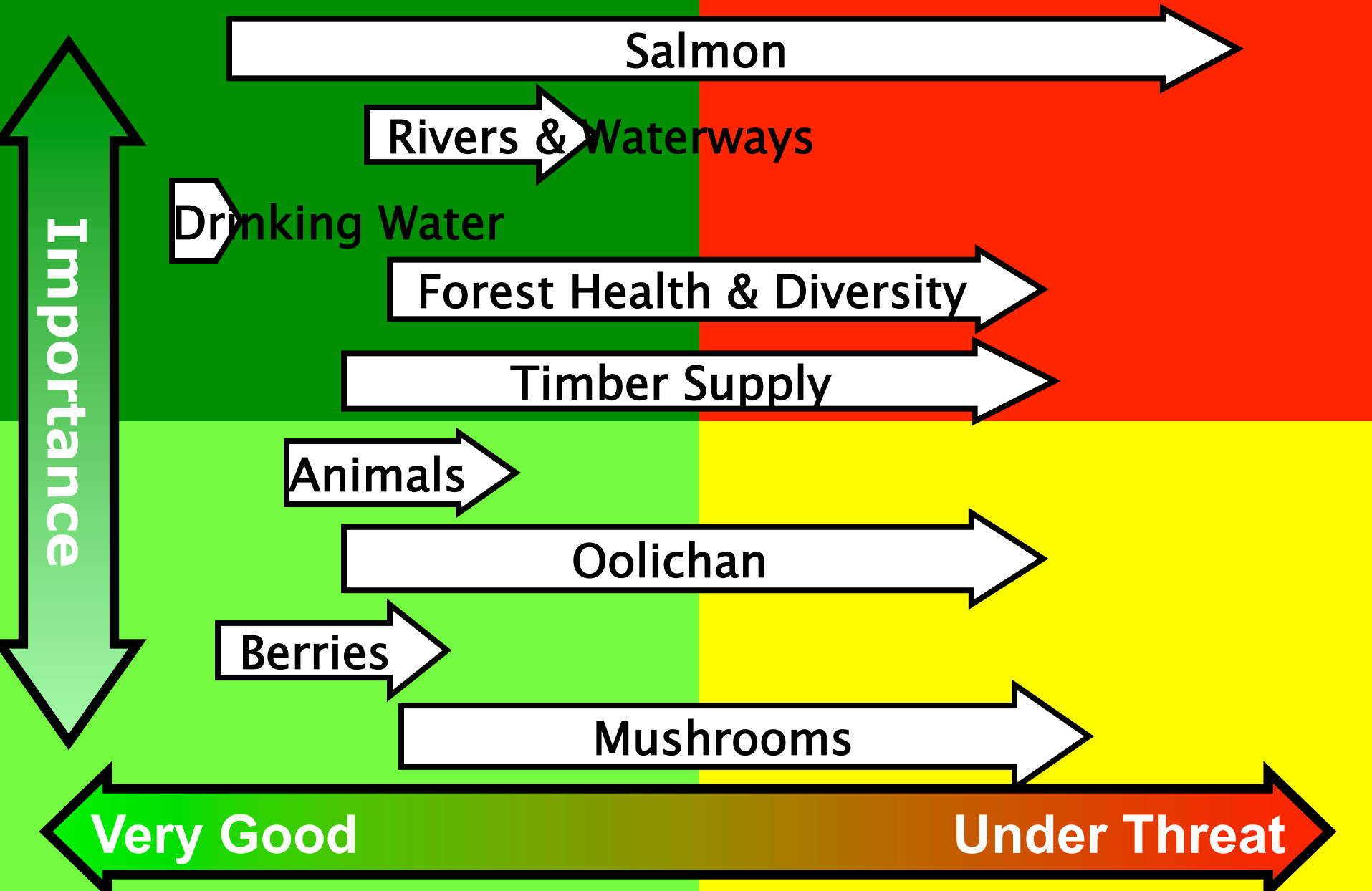
Valued Natural Resources in Prince



Valued Natural Resources in Prince Rupert



Changes in Natural Resources



Key Community Issues

98% mention economic issues

- Employment decline and need for new jobs
- Employment loss linked to population loss

72% mention social issues

- Health care and education
- Relationships between Prince Rupert and First Nations

34% mention environmental issues

- Fisheries a major concern
- Forestry also important to the community



Key Environment and Resource Issues

62% mention fisheries issues

- ❑ Health of salmon stocks

22% mention oil and gas development

- ❑ Pipelines and fisheries

18% mention climate change

- ❑ Ocean temperatures and fish stocks



Key Forestry Issues

76% mention industry organization

- ❑ Log exports a contentious issue
- ❑ Loss of pulp mill



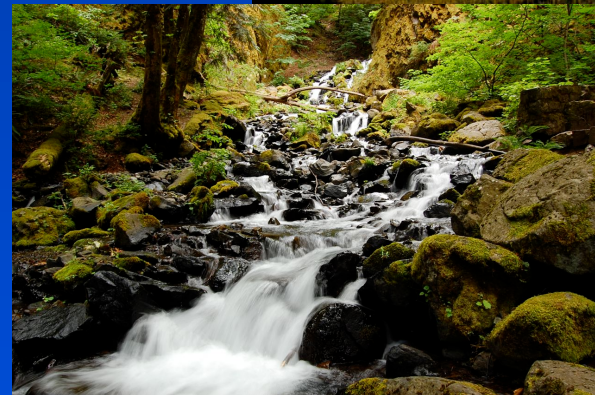
38% mention forestry management

- ❑ Division of resources between communities
- ❑ Access to timber



30% mention forest health

- ❑ Downstream impacts

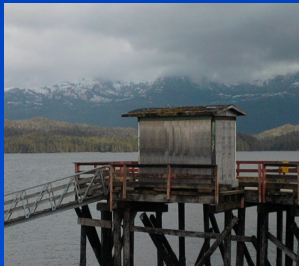


Sociology Team Research

- Wide range of the community consulted.
- Salmon and other marine resources highly valued.
- Economic issues seen as critical to the community, along with social and environmental issues.
- Many community resources have decline, but some have improved over past 20 years.
- All environmental resources are perceived to have declined in condition.
- **THANK YOU TO ALL PARTICIPANTS**

LATER in Part II

What does the future look like?



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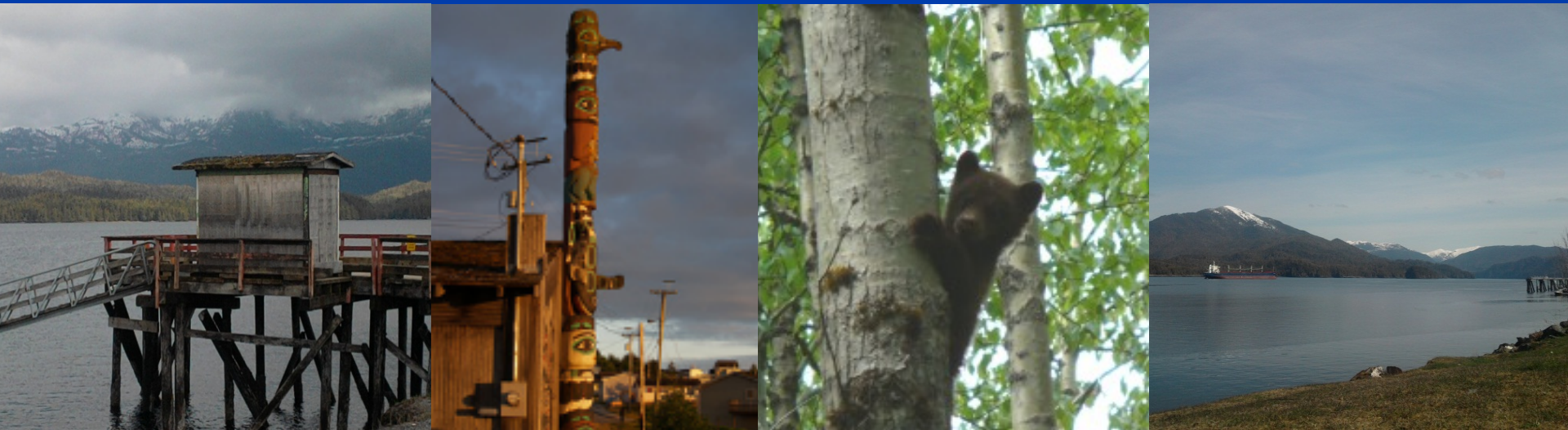
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Sociology Report Part II: Looking to the Future

- What role does climate change play?
- Do we have enough information to plan?
- What will drive change in the future?



Assessing Climate Change

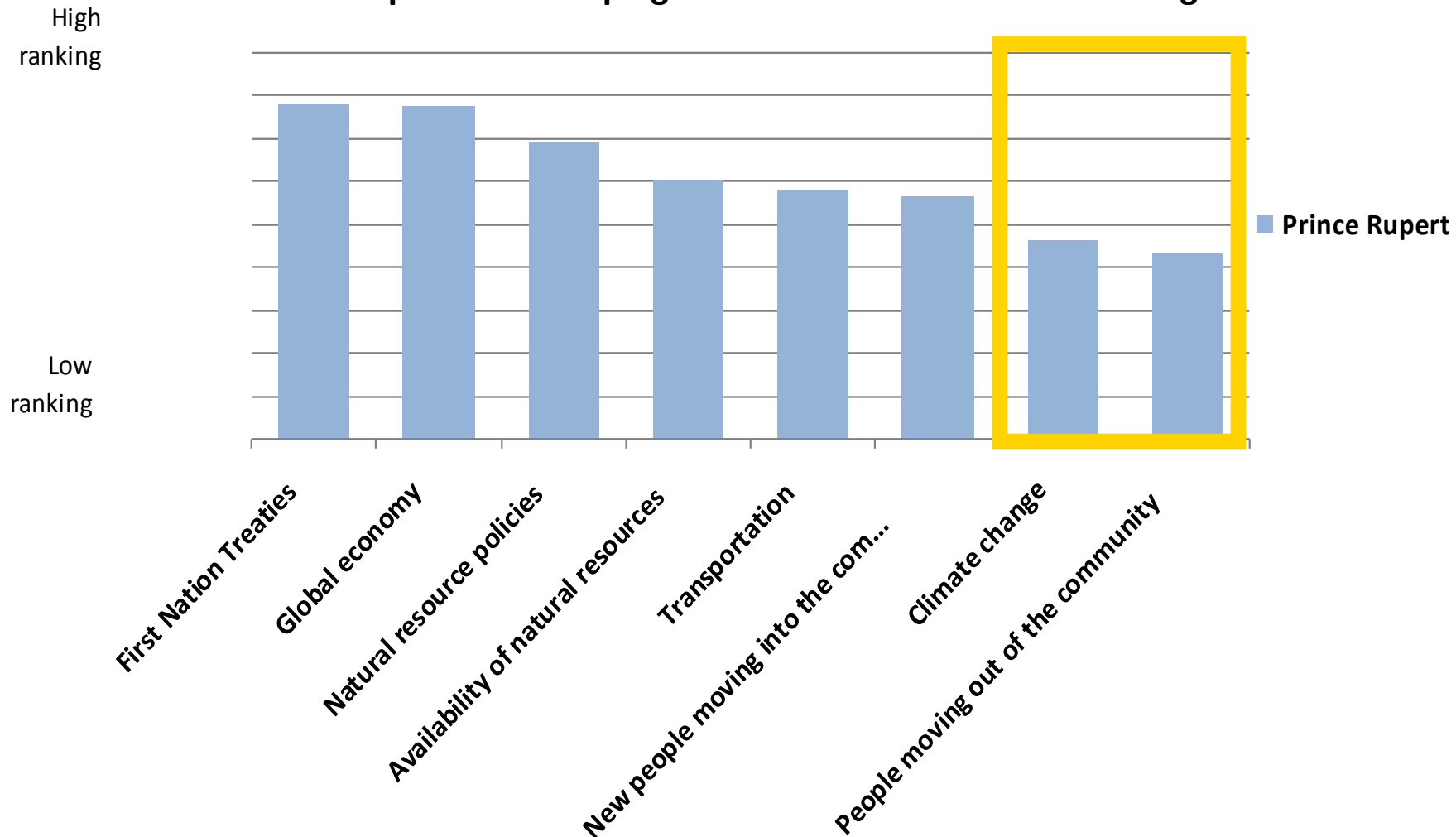
- 54% see relationship between climate change and key issues
- Concerns revolve around impact on natural resources (salmon and forests)
 - ❖ Uncertainty about influence on salmon
 - ❖ Forest impacts linked to industry impacts
- Concern about “Indirect” climate change impacts
- Climate change competes with other key issues.

Planning for Climate Change

- ❑ 38% think information is specific enough
- ❑ 36% believe Prince Rupert can plan for climate change based on information available
- ❑ Specific data does equate with the ability to plan for climate change.
 - ❖ Political will
 - ❖ Economic resources
 - ❖ Scale of change overwhelming to some

Drivers of Change in Prince Rupert

What will be important in shaping the future of the NW Skeena Region?



Local residents comment on climate change in Prince Rupert:

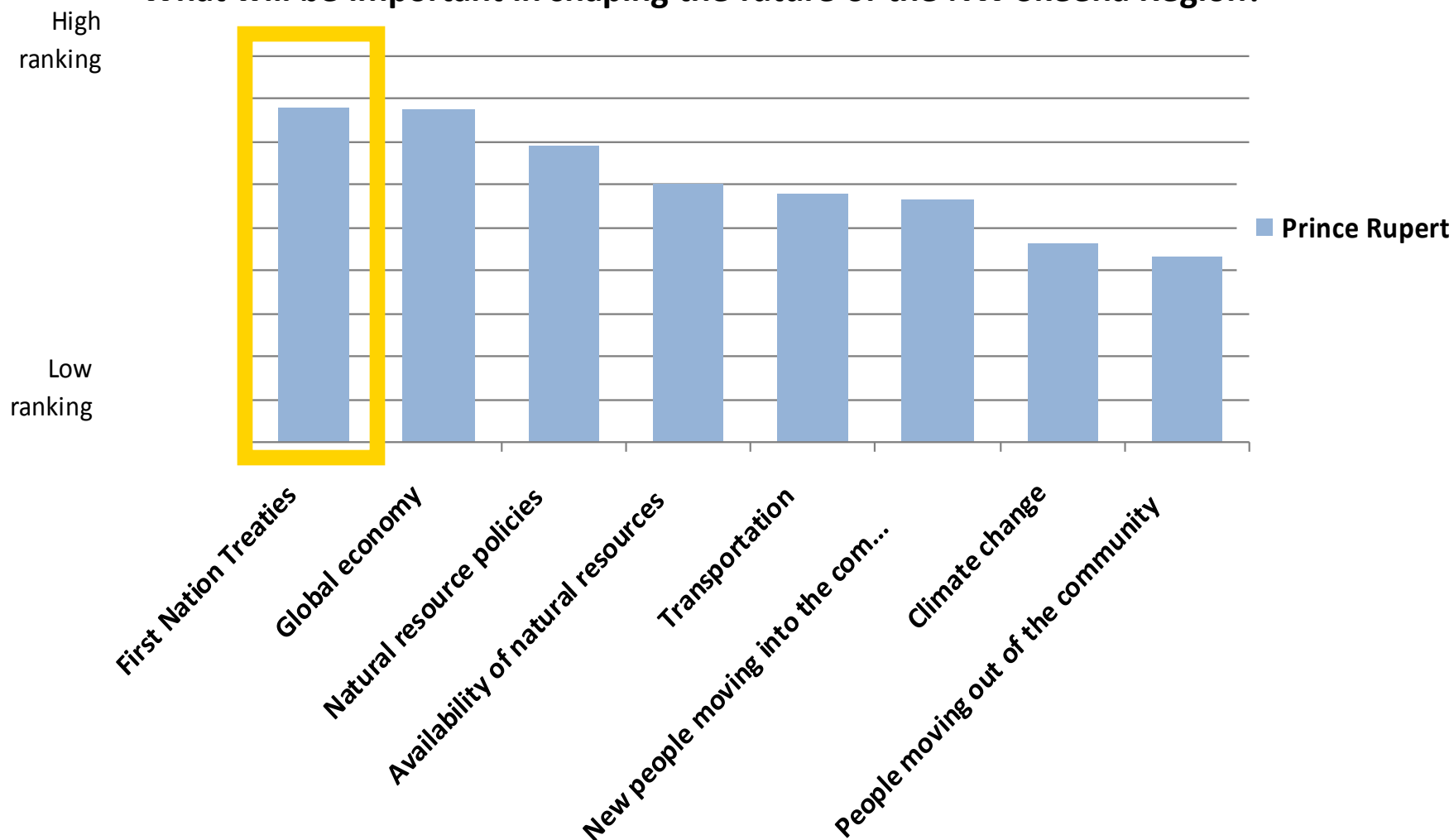
"Yeah, I think that we see, in Prince Rupert, the effects of climate change on-- it's easy to see the impacts of climate change. Foolish to say that you didn't see them. So, I mean, I think that there are huge impacts of climate change already that we're seeing in Prince Rupert."

"...they hear that the world's heating up, but here we're not. We get-- we're still cold, we're still rainy. We don't see a change in our climate."

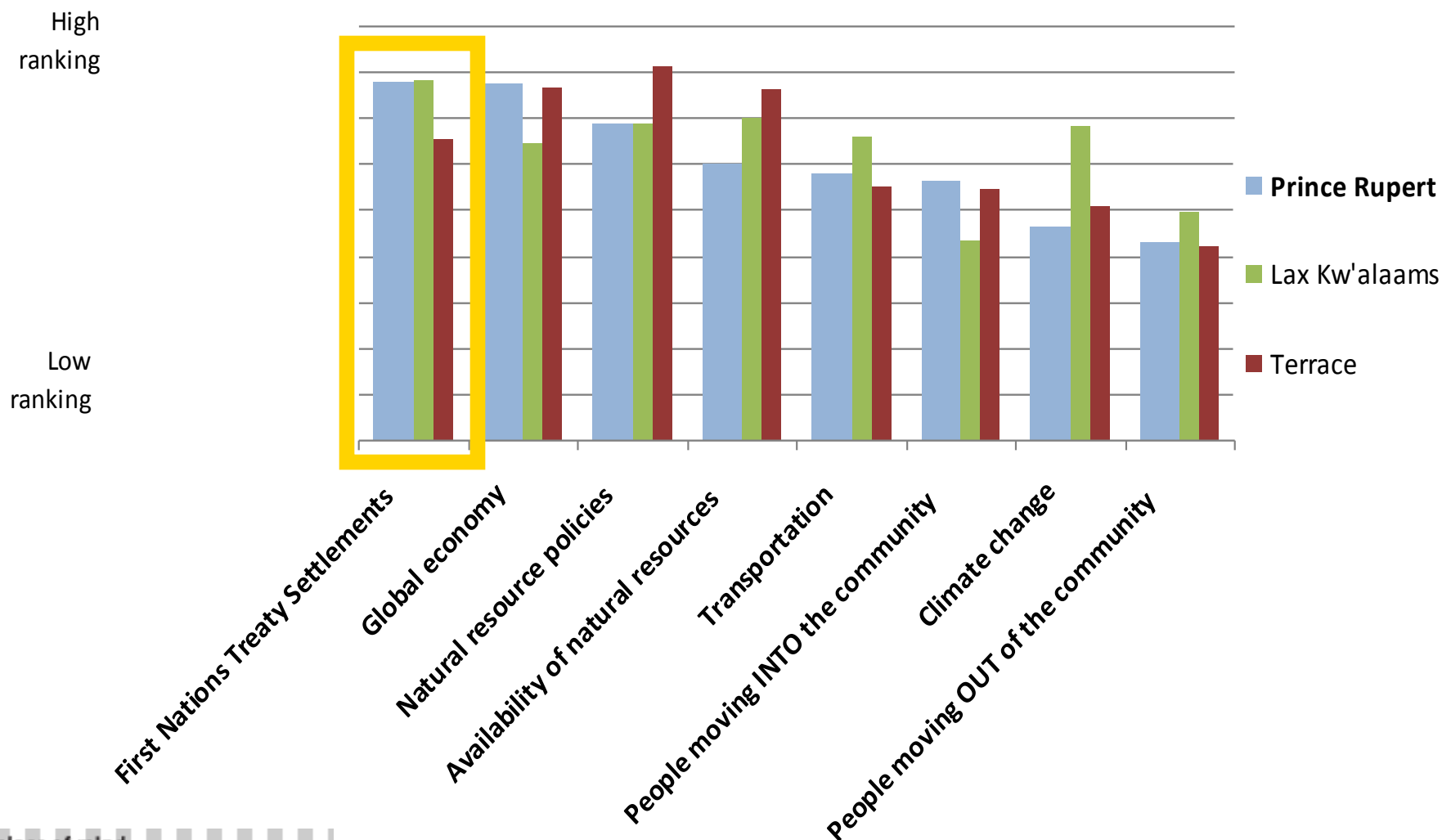


Drivers of Change in Prince Rupert

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Drivers of Change in Prince Rupert



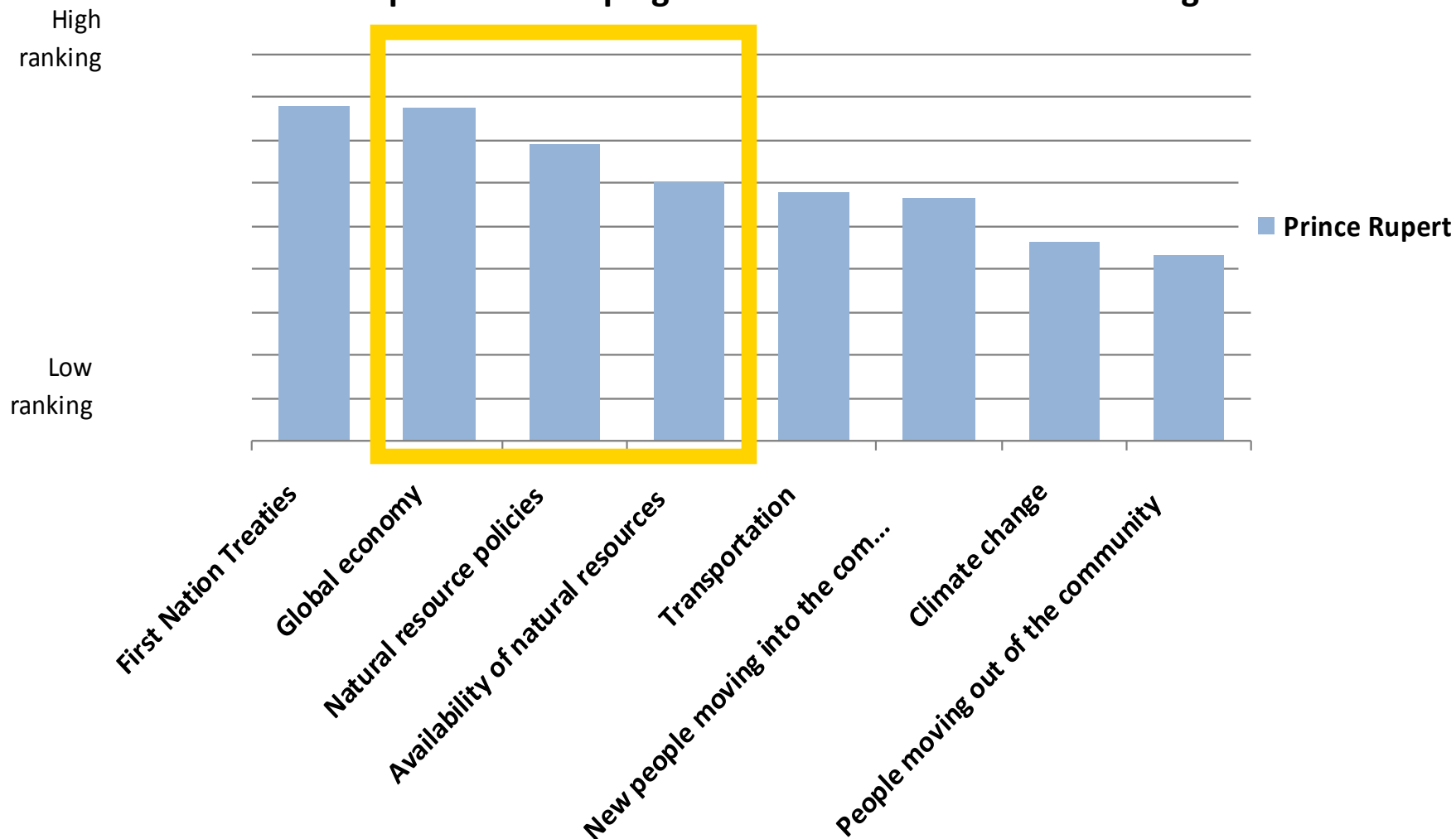
Local resident on First Nations Treaties:

"Because having viable, mutually beneficial partnerships with those individuals, having a real partnership, is absolutely key to moving those initiatives forward. And until that happens in earnest, there's no way for that economic impact to be flooding back into the community."

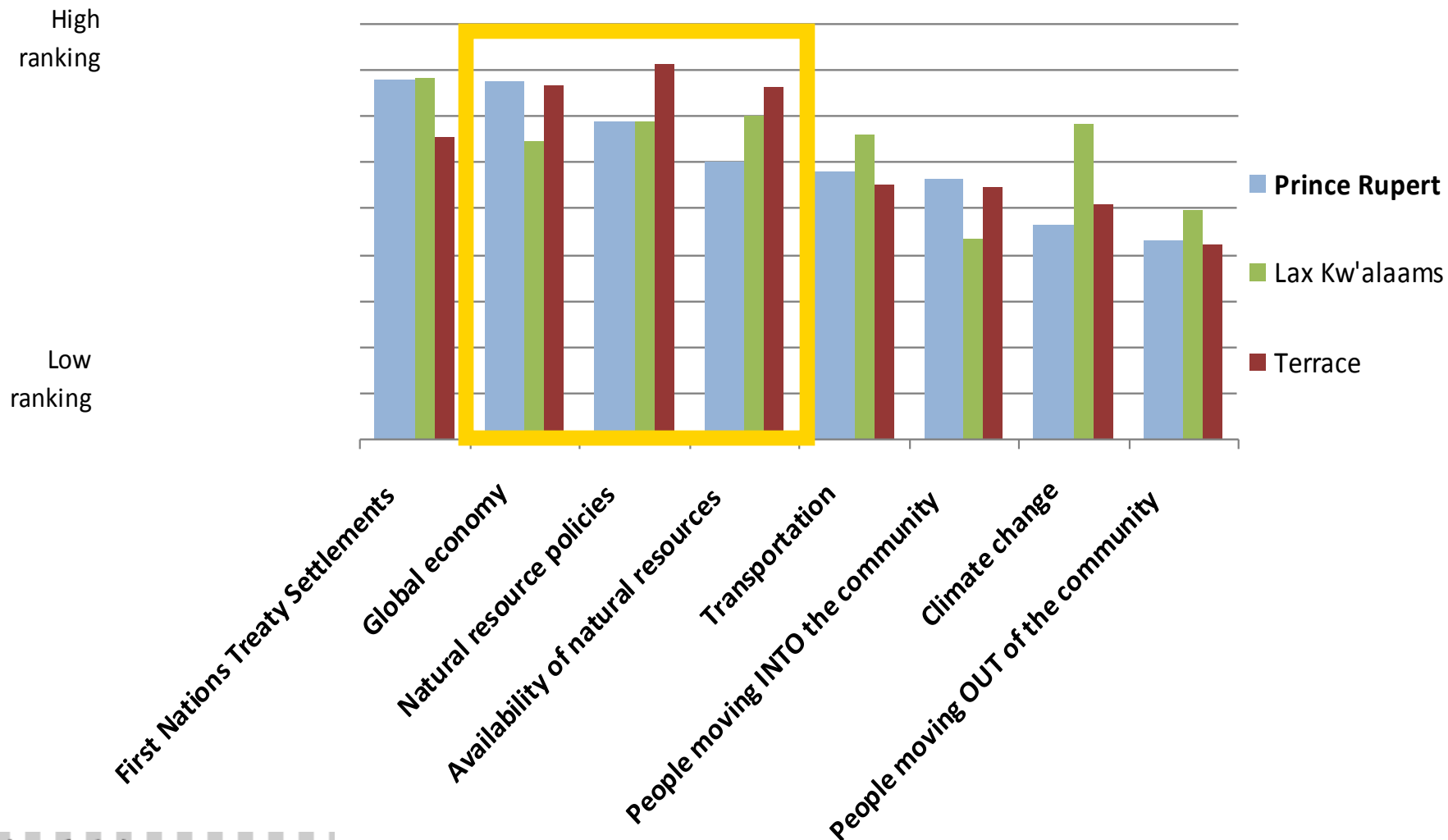


Drivers of Change in Prince Rupert

What will be important in shaping the future of the NW Skeena Region?



Drivers of Change in Prince Rupert



Local resident on global economy, natural resource policies, and availability of resources:

" Okay, well, I think the future of Prince Rupert is bright, even though I said all that negative stuff that we've gone through and we have gone through that. Prince Rupert has had a very, very tough time in the last ten years. If only we could market the products that we have for sale in Canada, to China and India better, that port would flourish even more. And I believe that's going to happen."



Visions of the Future

Do you think that the future is most likely to be determined by what goes on within the community and by the actions of local leaders, OR do you think the future will be determined more by external factors that may be largely outside local control?

"External factors. Local hasn't got a snowball's chance. The sport fishing industry is controlled by a handful of people down in Victoria, so they're going to control that. The logging industry, controlled out of Vancouver."

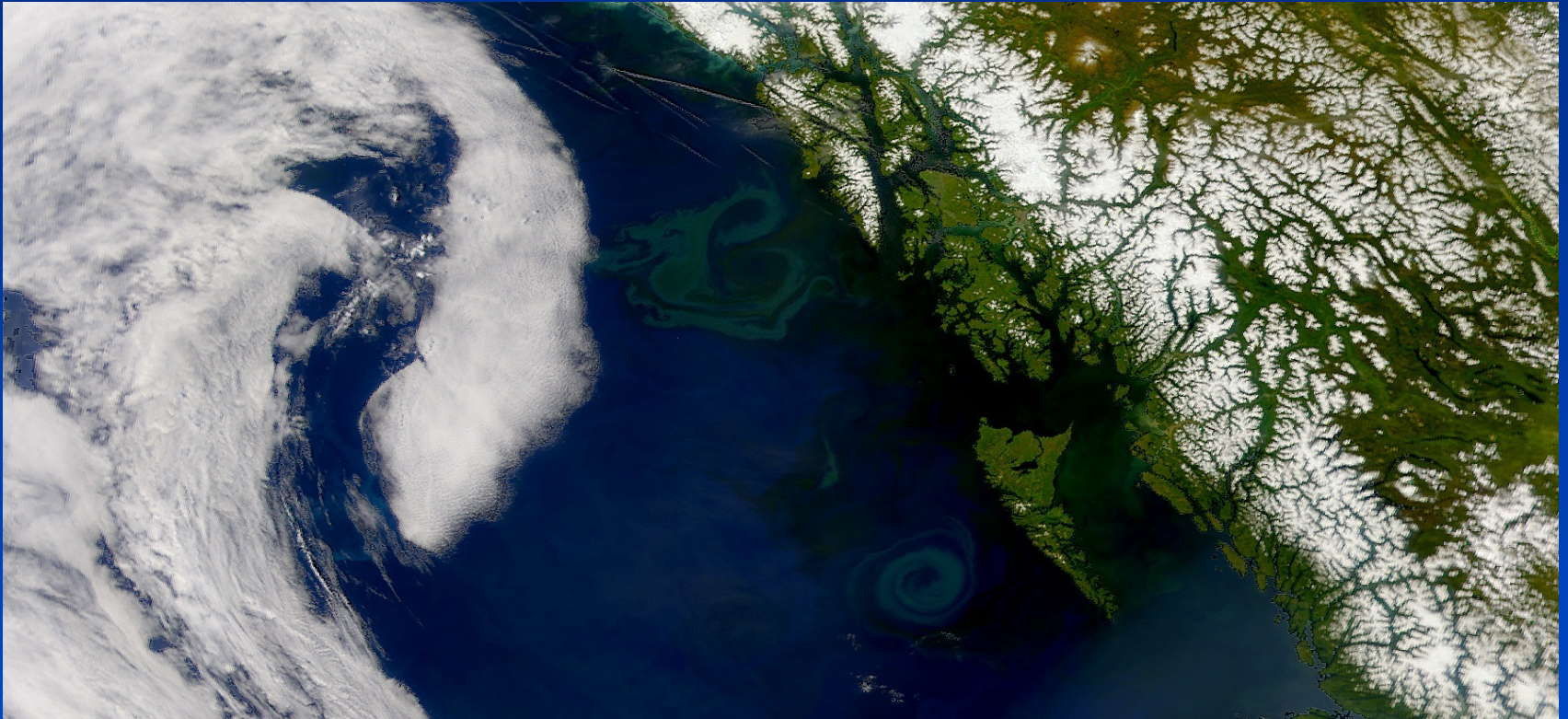
Summary

- Climate change often seen as being related to key issues, but other challenges seen as more pressing.
- Information alone is not enough for planning.
- When playing the global market local leadership is seen as a key to positive outcomes.

Planning for Adaptive Capacity: A Conclusion and a Beginning

Ralph Matthews, Ph.D.,
Professor of Sociology,
The University of British Columbia

Adaptive Capacity – Organizations, Institutions / Culture and Actions



Adaptation and Adaptive Capacity

- ❑ Earlier this morning Stewart Cohen talked about 'adaptation' as described by environmental scientist
 - ❖ i/e. **adaptation** to climate change
 - ❖ Vs. **mitigation** of climate change
- ❑ I introduced you to the idea of '**adaptive capacity**' of **communities**.
- ❑ As we end our discussion today, I want to come back to the concept of **community and adaptive capacity**.
- ❑ The question we are going to raise today is **how do you improve the adaptive capacity of your community?**
 - ❖ This is adaptive capacity to anything for which there is community exposure; community vulnerability

Exposures and Vulnerabilities

- ❑ The starting place is to think of a community as having exposures and vulnerabilities:
 - ❖ Vulnerabilities can be thought of as conditions about which you can potentially be affected – in some negative way.
 - ❖ Exposures are conditions which are already affecting you.
- ❑ We believe that the information provided you today suggests that you are not only vulnerable to environmental change but your communities is already exposed i.e. affected by environmental change.
- ❑ The critical question is whether your community has the ADAPTIVE CAPACITY to withstand and overcome the exposures.

Resilience Adaptive Capacity, and Potential

- ❑ Adaptive Capacity is more than resilience.
 - ❖ A community is 'resilient' if it survives exposure.
 - ❖ A community has adaptive capacity when it adapts to the new situation (exposure) and
 - (1) reforms its **organization**,
 - (2) changes **ways of doing things**, and
 - (3) acquires new **knowledge** so as to be well placed to do even better than before.

But adaptive capacity is only that i.e. it is potential.
It needs **action** to become reality.

Adaptive Capacity Involves

- ❑ Ensuring the way the community is **organized** is adapting in ways that will allow it to overcome exposures
- ❑ Ensuring that the **culture of local organizations i.e. institutions** work to support adaptive capacity,
- ❑ Ensuring that those in the community have the **knowledge** needed
- ❑ Ensuring that people responsible have the freedom to **act** to achieve Adaptive Capacity

Implementing adaptive capacity planning

❑ It's less about the “tool kit” [off the shelf solutions]

❖ i.e. EVERY COMMUNITY HAS TO DEVELOP ITS OWN APPROACH TO ADPTIVE CAPACITY. THERE IS NO 'STANDARD FIX'

❑ It's more about cultural relevance, about understanding and working with:

- ❖ local issues
- ❖ local impacts
- ❖ local concern
- ❖ local capacity

- ❑ Important:

- ❑ Not to be bound in looking at every new situation the way you looked at every thing in the past

- ❑ CRITICAL THING IS TO HAVE THE FLEXIBILITY IN YOUR COMMUNITY, IN THE WAY YOU DO THINGS, THAT PEOPLE ARE ABLE TO DEVELOP WAYS TO RESPOND EFFECTIVELY TO EXPOSURES

Developing Adaptive Capacity – This Afternoon Starts the Process

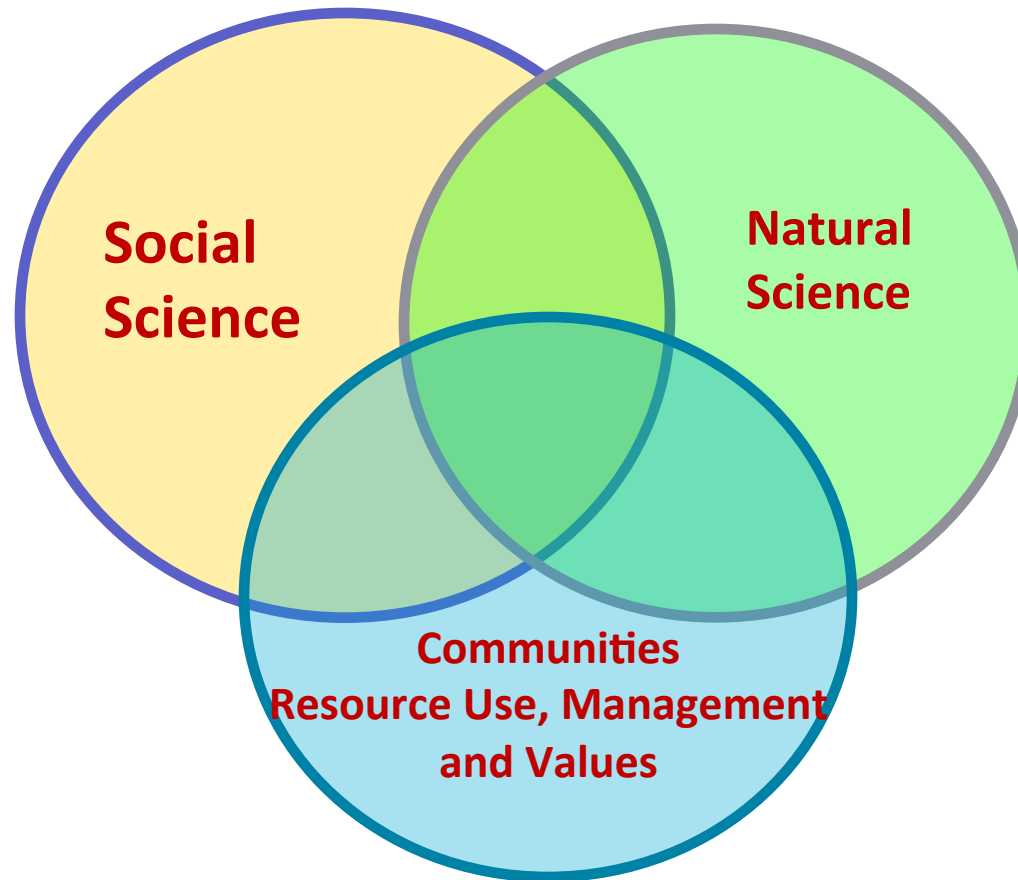
- ❑ Getting you thinking about the issues in terms of your values and your goals.
- ❑ Getting you assessing your adaptive capacity
- ❑ Translating a future climate stress into an effective community response
- ❑ Getting you thinking about the issues in terms of your strengths and weaknesses (SWOT)
- ❑ Getting you to think in terms of **the FIT, Interplay, and Scope** of your responses
- ❑ Getting you thinking about how / what may need to change
- ❑ Getting you to reflect on the future you want and the actions and social changes that may be needed to get there.

The Elements

- ❑ Fit – Does our organization fit the problem
- ❑ Interplay – Do we relate appropriately to others
- ❑ Scope – Geographic and Temporal

- ❑ Consider the four Ps
 - ❖ People
 - ❖ Policies
 - ❖ Politics
 - ❖ Processes

Bringing All Our Knowledges Together



The Process of Knowledge Integration and Mobilization

- ❑ We have been here today to bring you our 'knowledges'
- ❑ It has to be joined by your knowledge of your community and environment
- ❑ The goal of the rest of the day is to put our knowledges together – as a group, how do you answer the community vision questions

The Questions to Ask

- ❑ What knowledge can you trust?
- ❑ What do you need beside good information?
 - ❖ Commitment of people
 - ❖ Social Will (social licence) of the community
 - ❖ Financial resources

A community vision:

- ❑ What are the other drivers of change as outlined by your community in our presentation
- ❑ Do they overlap with resource planning and climate change planning?
- ❑ i.e. This is not just about climate change planning – it is about community change planning and community visioning.

This afternoon:

- We are getting you thinking about the issues in terms of:
 - ❖ The social science findings about your community values
 - ❖ The natural science findings about your ecology

We are asking you to consider how best to work with the overlapping area that was in the diagram this morning

We hope to get you thinking about the issues in terms of your values and in terms of your communities visions of its future.

We hope you will think about what you
need:
need to do,
to change,
to keep the same.

In developing not just a future vision of
your community in all its aspects, but a
climate change informed community
vision.

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